

Application No. 09/988,488
Amendment dated May 6, 2005
Reply to Office Action of February 7, 2005

REMARKS

Foreign Priority

The Office Action does not acknowledge a claim for foreign priority under 35 U.S.C. § 119 (a)-(d), which is contained in the Declaration and Power of Attorney. Submitted herewith is a copy of the postcard receipt showing that the U.S. Patent and Trademark Office acknowledged receipt of the Certified Copy of Priority Document on February 20, 2002. Acknowledgement of our claim for foreign priority and receipt of the priority document is respectfully requested.

Status Of Application

Claims 1-45 were pending in the application; the status of the claims is as follows:

Claims 28-45 are withdrawn from consideration.

Claims 1-8 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,444,807 to Liu ("Liu '807").

Claims 1-8, 12-20, 22, 23, and 27 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,020,207 to Liu ("Liu '207").

Claim 21 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Liu '207 in view of U.S. Patent No. 5,804,453 to Chen ("Chen '453").

Claims 9-11 and 24-26 are rejected under 35 U.S.C. § 103(a) as being upatentable over Liu '207 in view of U.S. Patent No. 6,235,471 B1 to Knapp et al. ("Knapp '471").

Information Disclosure Statement

Please note that an Information Disclosure Statement, along with a PTO Form 1449, was filed on January 9, 2002; however, we have not received a copy of the PTO Form 1449 initialed by the Examiner. Enclosed is a copy of the PTO-stamped postcard showing that the U.S. Patent and Trademark Office has received the Information Disclosure Statement and PTO Form 1449. Acknowledgment of receipt of this document is respectfully requested.

Drawings

To date, no Notice of Draftsperson's Patent Drawing Review has been received. Applicants respectfully request receipt of this document when it becomes available. Please note that the original drawings filed in the patent application are "formal" drawings.

Claim Amendments

Claims 1, 4, 6 and 17 have been amended to more clearly describe the invention. These changes do not introduce any new matter.

New Claims 46-51 have been added. These claims do not introduce any new matter.

35 U.S.C. § 102(b) and (e) Rejections

The rejection of claims 1-8 under 35 U.S.C. § 102(b) as being anticipated by Liu '807, is respectfully traversed based on the following.

Claim 1 is not anticipated by Liu '807 because claim 1 requires a limitation not found in Liu '807. Specifically, claim 1 recites, "a flow pass for containing a reaction, said flow pass having a confluence area; a detection target region wherein light from said reaction is to be generated, said detection target region being located within at least a portion of said flow pass and having an end located proximate said confluence area"

Thus, claim 1 requires that an end of the detection target region be located proximate the confluence area of the flow pass. In one embodiment of the present invention, specimen and reagent flow through flow passes and join so as to be mixed at a confluence area. By locating an end of the detection target region proximate the confluence area, detection can be performed after mixing of the specimen and reagent.

Liu '807 discloses a technique by which light absorption and fluorescence may be used as measures of the chemical properties of small amounts of a flowing liquid analyte. Liu '807 further discloses an apparatus including a flow through cell which functions as an optical waveguide. Col. 4, ll. 40-48. However, Liu '807 does not disclose a flow pass having a confluence area and further does not disclose a detection target region having an end located proximate the confluence area. Accordingly, Liu '807 does not disclose every limitation and cannot anticipate claim 1.

Claim 2 depends from claim 1 and thus includes every limitation of claim 1. Therefore, claim 2 is not anticipated by Liu '807 for at least the same reasons discussed in regard to claim 1.

Claim 3 has been cancelled. Thus, the rejection of claim 3 is moot.

Claim 4 is not anticipated by Liu '807 because claim 4 requires a limitation not found in Liu '807. Specifically, claim 4 recites, "a flow pass for containing a reaction, said flow pass having a confluence area; and a detection target region, located within at least a portion of said flow pass and having an end located proximate said confluence area, wherein light from said reaction is generated, said light passing through said detection target region to a light detection area" Thus, claim 4 requires that an end of the detection target region be located proximate the confluence area of the flow pass. As discussed above, Liu '807 does not disclose a flow pass having a confluence area and further does not disclose a detection target region having an end located proximate the confluence area. Accordingly, Liu '807 does not disclose every limitation and cannot anticipate claim 4.

Claim 5 depends from claim 4 and thus includes every limitation of claim 4. Therefore, claim 5 is not anticipated by Liu '807 for at least the same reasons discussed in regard to claim 4.

Claim 6 is not anticipated by Liu '807 because claim 6 requires a limitation not found in Liu '807. Specifically, claim 6 recites, "a flow pass for containing a reaction, said flow pass having a confluence area; a detection target region ... said detection target region being located within at least a portion of said flow pass and having an end located proximate said confluence area" Thus, claim 6 requires that an end of the detection target region be located proximate the confluence area of the flow pass. As discussed above, Liu '807 does not disclose a flow pass having a confluence area and further does not disclose a detection target region having an end located proximate the confluence area. Accordingly, Liu '807 does not disclose every limitation and cannot anticipate claim 6.

Claims 7-8 depend from claim 6 and thus include every limitation of claim 6. Therefore, claims 7-8 are not anticipated by Liu '807 for at least the same reasons discussed in regard to claim 6.

Accordingly, it is respectfully requested that the rejection of claims 1-8 under 35 U.S.C. § 102(b) as being anticipated by Liu '807, be reconsidered and withdrawn.

The rejection of claims 1-8, 12-20, 22, 23, and 27 under 35 U.S.C. § 102(e) as being anticipated by Liu '207, is respectfully traversed based on the following.

As discussed above, claim 1 requires that an end of the detection target region be located proximate the confluence area of the flow pass.

Liu '207 discloses a liquid waveguide capillary flow cell (LWCC). Sensing molecules are coated upon the inner wall surface of the LWCC. When a solution containing the appropriate analyte flows into the cell, the analyte reacts with the immobilized sensing molecules. When analysis light is subsequently transmitted through

the internally coated LWCC, optical signals indicative of this interaction can be collected and analyzed. Col. 1, line 64 through col. 2, line 18. However, Liu '207 does not disclose a flow pass having a confluence area and further does not disclose a detection target region having an end located proximate the confluence area. Accordingly, Liu '207 does not disclose every limitation and cannot anticipate claim 1.

Claim 2 depends from claim 1 and thus includes every limitation of claim 1. Therefore, claim 2 is not anticipated by Liu '207 for at least the same reasons discussed in regard to claim 1.

Claim 3 has been cancelled. Thus, the rejection of claim 3 is moot.

As discussed above, claim 4 requires that an end of the detection target region be located proximate the confluence area of the flow pass. Further, as discussed above, Liu '207 does not disclose a flow pass having a confluence area and further does not disclose a detection target region having an end located proximate the confluence area. Accordingly, Liu '207 does not disclose every limitation and cannot anticipate claim 4.

Claim 5 depends from claim 4 and thus includes every limitation of claim 4. Therefore, claim 5 is not anticipated by Liu '207 for at least the same reasons discussed in regard to claim 4.

As discussed above, claim 6 requires that an end of the detection target region be located proximate the confluence area of the flow pass. Further, as discussed above, Liu '207 does not disclose a flow pass having a confluence area and further does not disclose a detection target region having an end located proximate the confluence area. Accordingly, Liu '207 does not disclose every limitation and cannot anticipate claim 6.

Claims 7-8 and 12-16 depend from claim 6 and thus include every limitation of claim 6. Therefore, claims 7-8 and 12-16 are not anticipated by Liu '207 for at least the same reasons discussed in regard to claim 6.

Claim 17 is not anticipated by Liu '207 because claim 17 requires a limitation not found in Liu '207. Specifically, claim 17 recites, "a flow pass for containing a reaction, said flow pass having a confluence area; a detection target region wherein light from said reaction is to be generated, said detection target region being located within at least a portion of said flow pass and having an end located proximate said confluence area" Thus, claim 17 requires that an end of the detection target region be located proximate the confluence area of the flow pass. As discussed above, Liu '207 does not disclose a flow pass having a confluence area and further does not disclose a detection target region having an end located proximate the confluence area. Accordingly, Liu '207 does not disclose every limitation and cannot anticipate claim 17.

Claims 18-20, 22-23 and 27 depend from claim 17 and thus include every limitation of claim 17. Therefore, claims 18-20, 22-23 and 27 are not anticipated by Liu '207 for at least the same reasons discussed in regard to claim 17.

Accordingly, it is respectfully requested that the rejection of claims 1-8, 12-20, 22, 23, and 27 under 35 U.S.C. § 102(e) as being anticipated by Liu '207, be reconsidered and withdrawn.

35 U.S.C. § 103(a) Rejections

The rejection of claim 21 under 35 U.S.C. § 103(a), as being unpatentable over Liu '207 in view of Chen '453, is respectfully traversed based on the following.

Claim 21 depends from claim 17 and thus includes every limitation of claim 17. Specifically, claim 21 requires "a flow pass for containing a reaction, said flow pass having a confluence area; a detection target region wherein light from said reaction is to be generated, said detection target region being located within at least a portion of said flow pass and having an end located proximate said confluence area" As discussed above, Liu '207 does not disclose this limitation.

The Office Action cites Chen as disclosing a silver mirror at the distal tip of a fiber optic sensor. However, Chen fails to disclose that an end of the detection target region is located proximate the confluence area of the flow pass. Accordingly, claim 21 is not obvious over Liu '207 and Chen because Liu '207 and Chen fail to disclose all the limitations of claim 21.

Accordingly, it is respectfully requested that the rejection of claim 21 under 35 U.S.C. § 103(a) as being unpatentable over Liu '207 in view of Chen '453, be reconsidered and withdrawn.

The rejection of claims 9-11 and 24-26 under 35 U.S.C. § 103(a), as being unpatentable over Liu '207 in view of Knapp '471, is respectfully traversed based on the following.

Claims 9-11 depend from claim 6 and thus includes every limitation of claim 6. Specifically, claims 9-11 require "a flow pass for containing a reaction, said flow pass having a confluence area; a detection target region ... said detection target region being located within at least a portion of said flow pass and having an end located proximate said confluence area" As discussed above, Liu '207 does not disclose this limitation.

The Office Action cites Knapp as disclosing a flow-through optical analysis device in which various fluids are conducted to the sensing area via branched flow paths, valves and micropumps. However, Knapp fails to disclose that an end of the detection target region is located proximate the confluence area of the flow pass. For example, Fig. 13 of Knapp shows that detection zone 13110 is located near reagent well 1380, while the components are mixed in either channel 1365 or 1345. Col. 55, line 13 through col. 56, line 13. Accordingly, claims 9-11 are not obvious over Liu '207 and Knapp because Liu '207 and Knapp fail to disclose all the limitations of claims 9-11.

Claims 24-26 depend from claim 17 and thus includes every limitation of claim 17. Specifically, claims 24-26 require "a flow pass for containing a reaction, said flow pass

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having a confluence area; a detection target region wherein light from said reaction is to be generated, said detection target region being located within at least a portion of said flow pass and having an end located proximate said confluence area” As discussed above, Liu ‘207 does not disclose this limitation.

Further, as discussed above, Knapp fails to disclose that an end of the detection target region is located proximate the confluence area of the flow pass. Accordingly, claims 24-26 are not obvious over Liu ‘207 and Knapp because Liu ‘207 and Knapp fail to disclose all the limitations of claims 24-26.

Accordingly, it is respectfully requested that the rejection of claims 9-11 and 24-26 under 35 U.S.C. § 103(a) as being unpatentable over Liu ‘207 in view of Knapp ‘471, be reconsidered and withdrawn.

CONCLUSION

Wherefore, in view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and an early reconsideration and a Notice of Allowance are earnestly solicited.

This Amendment does not increase the number of independent claims, increases the total number of claims by 4 from 45 to 49, but does not present any multiple dependency claims. Accordingly, a Response Transmittal and Fee Authorization form authorizing the amount of \$200.00 to be charged to Sidley Austin Brown & Wood LLP’s Deposit Account No. 18-1260 is enclosed herewith in duplicate. However, if the Response Transmittal and Fee Authorization form is missing, insufficient, or otherwise inadequate, or if a fee, other than the issue fee, is required during the pendency of this application, please charge such fee to Sidley Austin Brown & Wood LLP’s Deposit Account No. 18-1260.

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Any fee required by this document other than the issue fee, and not submitted herewith should be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260. Any refund should be credited to the same account.

If an extension of time is required to enable this document to be timely filed and there is no separate Petition for Extension of Time filed herewith, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed.

Any other fee required for such Petition for Extension of Time and any other fee required by this document pursuant to 37 C.F.R. §§ 1.16 and 1.17, other than the issue fee, and not submitted herewith should be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260. Any refund should be credited to the same account.

Respectfully submitted,

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